Catalyst Measurement

Version 2016-01-26

Color Coding Legend Data Entry Cell Calculated Cell Percent Difference **Instrument Calibration Out of Range**

Engine Family HAMLC.198QPA VIN/Serial No. LXAPDZ055HX000028 Task Directive TD2, Opt 2 Entry Number ATG-1015158-3 Inspection Number 20161219-1245-01 Catalyst Inspection Date 12/19/2016 Certificate Catalyst Manufacturer Chongqing Guiyan Sino-Platinum Metals Catalyst Certificate Catalyst Part Number LF4212-552-70 Observed Catalyst Markings None

Daily Calibration Results Mitutoyo Calipers (SN: 04427304) Instrument Used Date of Last Simco Calibration (must be < 1 year) 4/27/2016 End Rod Result Accuracy (mm) 25 mm End Rod 25.00 0 50 mm End Rod 50.00 0 75 mm End Rod 74.99 0.01

Diameter: outside of exhaust piping Diameter: outside of catalyst casing Diameter: inside of catalyst casing (catalyst diameter) Length: exhaust piping Length: catalyst casing

Length: catalyst material Inset: catalyst casing (side 1) Inset: catalyst casing (side 2) Inset: catalyst substrate (side 1) Inset: catalyst substrate (side 2)

Counted cells (total) Avg. inside diameter of casing (in) PAIR Observed? (Y/N) PAIR Photo Name

| 1st Measured Value (mm) | 2nd Measured Value (mm) | 3rd Measured Value (mm) | 4th Measured Value (mm) |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Not measurable | Not measurable | Not measurable | Not measurable |
| 45.1 | 45.6 | 45.4 | 45.4 |
| 39.39 | 38.35 | 38.59 | 39.25 |
| 103.27 | 103.37 | 103.31 | 103.30 |
| Not measurable | Not measurable | Not measurable | Not measurable |
| Not directly | Not directly | Not directly | Not directly |
| measured | measured | measured | measured |
| Not measurable | Not measurable | Not measurable | Not measurable |
| Not measurable | Not measurable | Not measurable | Not measurable |
| 8.80 | 8.86 | 8.81 | 8.94 |
| 4.23 | 4.33 | 4.24 | 4.23 |
| | | | |

| 361 | |
|------|----------------|
| 1.53 | |
| N | (see comments) |
| N/A | |

| _ | | | |
|----------------------------|----------------------------------|--------------------|--------------------|
| | Calculated Average Value (mm) | Percent Difference | Certificate Values |
| | | | |
| | 45.36 | | |
| | | | |
| | 38.90 | | |
| | 103.31 | | |
| | | | |
| | | | |
| | 90.20 | | |
| | | | |
| | | | |
| | 8.85 | | |
| | 4.26 | | |
| | | | |
| volume cc | 107.18 | | |
| cells/in ² | 196.02 | | |
| Certified with PAIR (Y/N)? | | | |
| | | | |

-This is catalyst 1 of 2 (see Catalyst Arrangement tab for photos) located upstream from catalyst 2. Comments -The Cert. app does not specify if the certified length and diameter are for the catalyst casing or the substrate. ERG entered them as the catalyst casing dementions in Column I.

Areas of Concern None

Photo Used for Counts DSCN6496_CellCount.jpg Inspector: Cassidy Owen Report Date: 12/22/2016